

# Study of the Ability of Knowledge Management and the Construction of Wisdom Capital

## L'INFLUENCE DE LA CAPACITE DE LA GESTION DU SAVOIR SUR LA CONSTRUCTION DU CAPITAL INTELLECTUEL DANS LES ENTREPRISES

Li Lingzhi<sup>1</sup>

**Abstract:** This paper studied the concept of knowledge management and those factors, which influence it, and the constitution of KM, with the index of ability of KM. Also it studied the wisdom capital. Then the relation of KM and wisdom capital was researched following which the conclusion was gained that improve the ability of KM could be improved by the improvement of the ability of wisdom capital management.

Key words: knowledge management (KM), intellectual capital, ability of KM

**Résumé:** Ce document étudie à la fois la compréhension de la gestion du savoir et les facteurs qui influencent là-dessus, les constituants de la capacité de la gestion du savoir et les indices mesurables de cette capacité, aussi le rôle du capital intellectuel basé sur le travail intellectuel et l'évaluation de ce capital intellectuel. Après l'analyse de la relation entre le capital intellectuel et la capacité de la gestion du savoir, la méthode consiste à intégrer la gestion du capital intellectuel dans celle du savoir, c'est-à-dire que l'amélioration de la capacité de la gestion du capital intellectuel mène nécessairement à l'amélioration de la capacité de la gestion du savoir.

**Mot-clé:** la gestion du savoir, le capital intellectuel, la capacité de la gestion du savoir

In the period of knowledge, the fundamental origin of rich has changed to the knowledge and its spread, but also not only the natural resources and labor. The decrease of traditional labor-intensive industry causes the operators to change the model of operation and pay more attention to leaning and the innovation of knowledge, and to improve the added value furthermore in order to maintain the core power of competition. Now knowledge-management has become the professional keyword to describe the organizational learning and tools of database management. And the objective of knowledge management is to upgrade the intellectual capital so as to keep the core power of competition rooting in the knowledge in the long term.

### 1. ABILITY OF KNOWLEDGE MANAGEMENT

To understand the ability of knowledge management, we should make the following questions clear.

- The definition in knowledge management;
- The meaning of knowledge management;

- The index to evaluate the ability of knowledge management;

There are many definitions of knowledge on different point of view. Quintas thinks knowledge in company was the intangible assets closely connected with "individual", and the types of knowledge have (1)market and customers,(2)products,(3)professional knowledge,(4)information of human resources,(5)core process of business,(6)information of dealing,(7)management information,(8)information of suppliers. On the catalog of tacit knowledge and explicit knowledge, Nonaka&Takeuchi (1995) studied the interaction of knowledge, and divided the course of transfer of knowledge into 4 sections: Socialization, externalization, combination, internalization, and the course of knowledge formed a spire with the innovation of knowledge (Barnes,S., 2002,pp.152-159). So we can see that knowledge is depended on the individual, the process of organization, and the communication of inner and outer of the organization; and the transfer and using of knowledge is the transfer from tacit knowledge to explicit knowledge such as the experience, decision, view of value, etc.. Therefore, although knowledge is own by individual and portions of the organization, and

<sup>1</sup> Economic and Management Institution of Nanjing University of Science and Technology, China.

\*Received 23 January 2006 ; accepted 2 March 2006

on the division of tacit knowledge and explicit knowledge, thus the knowledge management should cover all of the scope.

The meaning of knowledge management is that knowledge is a process, in which intellectual capital is collected to make advancement in productivity and innovation, and is connected with the gathering, innovation and combination so as to produce a more intellectual and competitive organization. Most scholars think that knowledge management should pay attention to build a work conditions to support the knowledge working of employee. Those conditions are also a kind of basic construction of organization. In order to produce, store, transfer and spread knowledge effectively, the process of knowledge management should be built. Sarvary(1999)thought, there were three courses in the process of knowledge management:(1)organization learning, a course of gathering information and knowledge of the organization,(2) producing knowledge, a course to combine the unprocessed information to help the organization to solve the business problems,(3)knowledge spreading, a course to spread knowledge among the members of organization(Davenport.T., S.Jarvenpaa, and M. Beers, 1998, p37.). Therefore, the meaning of knowledge management has two portions, one is the construction of basic structure of knowledge management, and the other is the activity in knowledge management, which is the process of knowledge management.

So on the analysis of the above, to evaluate the ability of knowledge management of an organization, is there two parts: one is the evaluation of the ability of construction of the knowledge management, and the other is the evaluation of the ability of the procession of knowledge management. To the ability of construction of the knowledge management it includes (1) technology, which determines the flow and method of store of knowledge. Only on the connection of information systems in organization, the communication of knowledge in different parts of organization becomes possible, then an organization should build an information system to exchange the knowledge including those from the out of the organization, to support the communication of knowledge in organization.(2)structure, which plays an very important role in the knowledge management. An organization should own a bouncy structure of knowledge management to suit with the changing environment, and the structure also includes the institutions to share and innovate knowledge.(3)culture. Culture in an organization is very important to share knowledge, especially to the management of tacit knowledge. The organizational culture is the key to share and communicate among members and parts of the organization. Besides the objection of organizational culture also strongly affluences the generation of knowledge. To the ability of the procession of

knowledge management it includes (1) knowledge acquisition, which aims at the acquisition of knowledge and improve the efficiency of the acquisition including the combination and renovation of knowledge among organizations. (2) knowledge conversion which aims to improve the effect of knowledge to the organization in order to convert the tacit knowledge into exercise by the systemization, summarization, literature and formation.

(3) exercise of knowledge, which includes the efficient store and query system of knowledge. Meanwhile, a good exercise of knowledge with the outside organization can upgrade knowledge and solve new-coming problems to help the decision of an organization.(4)protection of knowledge. As a strategic sources, the protection of knowledge will do help to maintain of the dominant position of an organization in competition. Therefore, an organization should try to protect its knowledge to avoid the improper using inside and outside of the organization.

The factors influencing the knowledge management are (1) objective and desire at the construction of knowledge management, it should be examine for the objective and the desire of knowledge management system of an organization, including the standard of evaluation, the support of organization, and the supply of sources, etc. (2) characters of organization. The inner environment and conditions influencing the construction of knowledge management can be divided into the culture and common view, structure and institutional system, the communication and prompting system and the skills and leaning ability of the organization.

## **2. CONSTRUCTION OF INTELLECTUAL CAPITAL**

At the coming of knowledge economy, the true value of company is not decided only by the financial data, and some other data can truly be used for the evaluation of the position of competition. A research of the Association of Brookings, USA, showed the percentage of intangible assets in the total assets has increased from 20% at 1978 to the 55% at 1988, furthermore, it reached 75% at 1998, and by now, the most important assets are those intangible intellectual capital, such as the human resources, technology, R&D. so that, the construction has become the key to the succeed of a company.

The economics of John Kenne Galbraith used the concept of intellectual capital at 1969, and he thought, the usage of intellectual capital was the behavior of intellectual action, and used to explain the reason that the gap between the face value and the market value of a company. From then on, many scholars pay attention to the study of intellectual capital. Now the intellectual

capital is the collection of knowledge, ability which can bring the dominant competition to the organization from each member in academe. Ulrich (1998) defined the intellectual capital as the multiplication of ability and promise. The methods to improve ability are: purchase, hiring new employee or introducing knowledge from other departments; creation, training members to develop the talent, from the outside organization, for example the customers, ejection, dismissing the unsuitable employee, and holding, retaining the excellent employee. As for as promise, the method of enhancing it is the following steps: to low the requirement of organization aiming at the keystone, sorting on the priority; then to increase the sources by providing competitive task, team work, technology supporting, and the sharing success. Stewart (1997) assorted the intellectual capital into human resource capital, structural capital and customer capital that are the ability of employee, the efficiency of operating system, and the relation with customers. The origin of the human source capital is from the obtaining and applying of knowledge of the employee, which can be rented only, but not owned by the organization. Therefore, it demands the change of salary system to the employee so that they would be a partners but not the workers only to share the knowledge and ability, and it is required for the R&D team, to supply needed sources to promote the human capital by the transfer, innovation of knowledge. The structural capital belongs to the organization, and can be duplicated, shared easily, such as the technology, invention, data, culture, process and program. Storing knowledge and connecting knowledge and individual are the functions of structural capital, which requires a integrated knowledge base, and an effective knowledge flow. And the customer capital requires organization to know what the customer wants, to share information with customer, and to learn from customer, etc. (Carneiro, A., 2001, pp. 358-367)

To the creation of intellectual capital, are there two basic processes: exchange and integration. As for integration, there are two forms: (1) the gradual evaluation of knowledge,(2) drastic innovation or change, while the exchange is the change of explicit knowledge out of the individual or collection which is assisted by the interaction of society, and common action, such as corporation, team-working. And in a further discussion, exchange and integration happen only under the following 4 conditions. The first is the opportunity, which is a partner to exchange and integrate with could be found. The second is the anticipation of profit by exchange and integration. The third is promoting, which is the occasion of exchange and integration. And the last is the ability to integrate, which is the organization should have the ability to absorb knowledge.

Because of the difficulty to discover the true value of intellectual capital, Brooking (1996) thought to evaluate the intellectual capital it is the first task to identify the

target and strategy, then the next is the index of evaluation, such as the ability to insure the organization to reach the target, the program of R&D, the background of recreation of organization, the emphasis of training and educating, the estimation of value of organization, the expending of organizational memory, etc.. however, Edvisson & Malone(1997) defined the intellectual capital of the organization by the equation : intellectual capital =  $\text{coe}(i) \times \text{abs}(c)$ , and  $\text{coe}(i)$  is the coefficient of the efficiency of the intellectual capital, which includes 9 items, including the occupation of market, degree of customer satisfaction、leader power, etc.. And  $\text{abs}(c)$  is the absolute value of intellectual capital, which includes 21 items, such as the training of employee, the service for customers, information technology, patent, investment (Brooking, A., 1996 & Teece, D.J., 1997).

### **3. RELATION BETWEEN INTELLECTUAL CAPITAL AND ABILITY OF KM**

Obviously, there is an interactive relation between the ability of knowledge management and the construction of intellectual capital.

As a special source belonging to the individual, it is the personal behavior of brain of the member of organization. But on the view of organization, it is also a special component of the capital serving the organization, which is the intellectual capital, is the summation of knowledge, ability that can bring the dominant competition to the organization from each member. Therefore, as a source of organization, it is a very important question that how to transfer the personal wisdom into the capital domination through the organizational management which is related to the knowledge management. Meanwhile, as a part of organizational management, knowledge management works by the member of organization, servers for the target of organization, and achieve the priority of organization. Just as mentioned on the above, knowledge owned by individual, works by the conversion of the personal tacit knowledge, such as the experience, decision in the process of organization, the communication of inside and outside of organization, to realize the applying of knowledge. Thus, knowledge management realizes the coupling of personal activity and organizations. And only by knowledge management, the tacit knowledge could convert to the explicit knowledge.

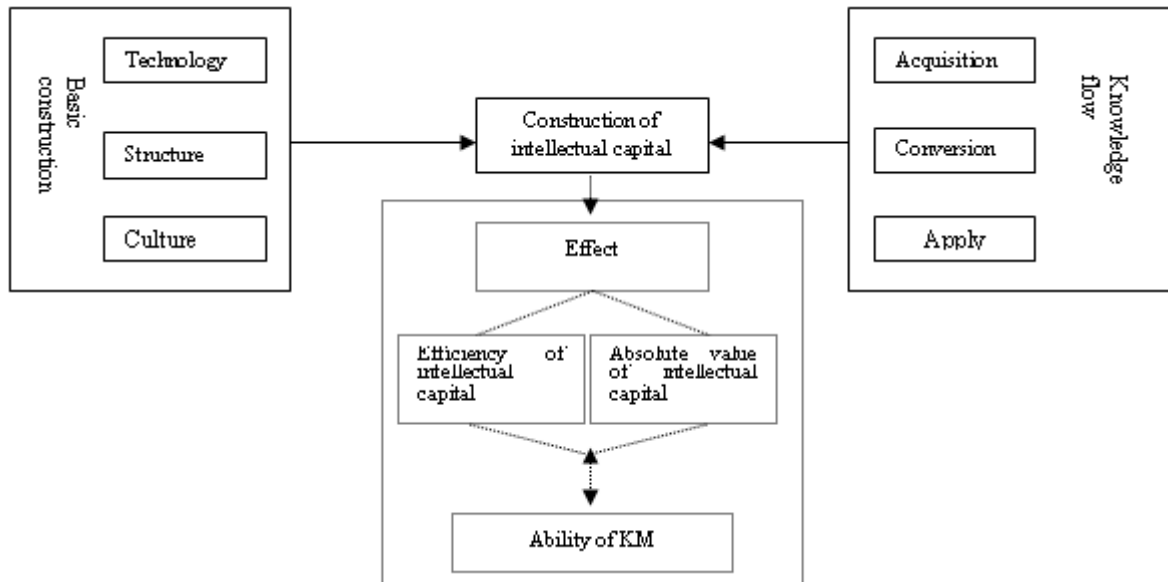
Obviously, the applying of intellectual capital of the employee will be efficient in an organization with excellent knowledge management, and the construction of intellectual capital should be an important component of the ability of knowledge management, furthermore,

the target of knowledge management is the management of knowledge flow abstractly; while concretely, it is the carrier of knowledge, such as the member, the storage, and hardware. On the above discussion, the construction should emphasize how to realize the integration of intellectual capital and other components of knowledge management in order to construct the intellectual capital, serve the target of organization, and improve the level of knowledge management and the organizational

management to achieve the priority of organizational strategy.

On the analysis, knowledge management is made up of the basic framework and the management process. Therefore, the construction of intellectual capital could be made on those, too. And the relation is shown on the following figure 1.

Figure 1.



The construction of intellectual capital is to serve the targets of organization, improve the efficiency and benefit, and belongs to an important content of knowledge management. In an organization, which has been constructing the intellectual capital, the effect of construction will be embodied in the progress of the ability of knowledge management. Therefore, the

quantitative evaluation of knowledge capital includes the following components (seeing figure 1). But in reality, it is difficult to make quantitative evaluation, thus, it is more practical that the identification of intellectual capital by Edvisson & Malone (1997) in operating.

## REFERENCES

- Andrew, H. G., M. Arvind, and H. S. Albert. (2001). 'Knowledge Management: An Organization Capabilities Perspective'. *Journal of Management Information Systems*, Summer, 18(1)
- Barnes, S. (2002). 'Knowledge management systems: Theory and practice'. *Thomson Learning*, pp.152-159
- Brooking, A.. (1996). 'Intellectual capital: core asset for the third millennium enterprise'. *Managing intellectual capital: licensing and cross-licensing in semiconductors and electronic*. London: International Thomson Business Press Gridley, P. C. & Teece, D.J. (1997).
- Carneiro, A. (Number 4, 2001). 'The role of intelligent resources in knowledge management', *Journal of Knowledge Management*, vol. 5, pp. 358-367
- Chang Jinling. (2000). 'Optimal Scheme of Realizing Knowledge Management: Comprehensive Integration.' *Information Science*, 11
- Davenport, T., S. Jarvenpaa, & M. Beers (1998). 'Improving Knowledge Work Processes'. *Sloan Management Review*, 37.
- Li Huawei. (2001). *Theory and Practice of Knowledge Management*. Beijing: Huayi Press.
- Qiu Junping, Duan Yufeng, Yue Ya. (1999). 'Knowledge Management and Information Management'. *The journal of the*

*library science in China*,6

Yu Yihong, 'R & D Management (2002). *Knowledge Management and the Competition of College*, 2

### **THE AUTHOR**

**Li Lingzhi**, bachelor (Wuhan University), adjunct professor (Nanjing University of Science and Technology), management science and technology; Economics and Management Institute, Nanjing University of Science and Technology. P. R. China.

Email:mypublic01@sina.com